

MCF 3M Opener

Expand the following

i) $(3x-6)(2x+7)$

ii) $(2x+4)^2$

iii) $(x-6)(x+6)$

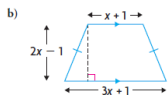
Feb 11-3:37 PM

MCF 3M Opener

Expand the following

$$\begin{aligned}
 \text{i) } (3x-6)(2x+7) &= 6x^2 + 21x - 12x - 42 = 6x^2 + 9x - 42 \\
 \text{ii) } (2x+4)^2 &= (2x+4)(2x+4) = 4x^2 + 8x + 8x + 16 = 4x^2 + 16x + 16 \\
 \text{iii) } (x-6)(x+6) &= x^2 + 6x - 6x - 36 = x^2 - 36
 \end{aligned}$$

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b)

$$\begin{aligned}
 A(x) &= \frac{(a+b)h}{2} \\
 A(x) &= \frac{(x+1+3x+1)(2x-1)}{2} \\
 &= \frac{(4x+2)(2x-1)}{2} \\
 &= \frac{8x^2 - 4x + 4x - 2}{2} \\
 &= \frac{8x^2 - 2}{2} \\
 A(x) &= 4x^2 - 1
 \end{aligned}$$

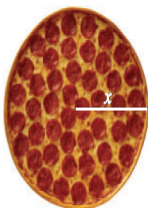
Sep 22-8:27 AM

Sep 22-8:27 AM

11. A circular pizza has a radius of x cm.

- Write an expression for the area of the pizza.
- Write an expression for the area of a pizza with a radius that is 5 cm greater.
- How much greater is the second area? Write the difference as a simplified expression.

Communication Tip
The formula for the area of a circle is $A = \pi r^2$.

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Communication Tip
The formula for the area of a circle is $A = \pi r^2$.

$$\begin{aligned}
 \text{a) } A &= \pi x^2 \\
 \text{b) } \pi (x+5)^2 - \pi x^2 &= \pi (x^2 + 10x + 25) - \pi x^2 \\
 &= \pi x^2 + 10\pi x + 25\pi - \pi x^2 \\
 &= 10\pi x + 25\pi
 \end{aligned}$$

Sep 22-8:28 AM

Sep 22-8:28 AM



$$a^2 + b^2 = c^2$$

$$a^2 = c^2 - b^2$$

Proof

$$(n+1)^2 - n^2 = 2n+1$$

$$(n+1)(n+1) - n^2 = 2n+1$$

$$n^2 + (n+1) - n^2 = 2n+1$$

$$n^2 + 2n + 1 - n^2 = 2n+1$$

$$2n+1 = 2n+1$$

$$2n+1 = 2n+1$$

$$LS = RS$$

b) $5^2 = 2n+1$

$$25 = 2n+1$$

$$25-1 = 2n$$

$$\frac{24}{2} = \frac{2n}{2}$$

$$12 = n$$

Sep 19-8:41 AM

Factoring (\div) Step 1 Common Factor

i) $3x^3 - 6x^2 = 3x^2(x-2)$

ii) $2x^2y + 4x^3y^2 = 2x^2y(1+2xy)$

Proof

$$2x^2y + 4x^3y^2 = 2x^2y(1+2xy)$$

$$2x^2y + 4x^3y^2 = 2x^2y + 4x^3y^2$$

Feb 23-10:22 AM

iii) $10a^2b^3 + 20a^2b - 15a^2b^2c$

$$5a^2b(2b^2 + 4 - 3bc)$$

p93 & 94 q 3,6,7,11, 15 & 16

Feb 23-10:31 AM

3a) $4x^2 - 6x + 2 = 2(2x^2 - 3x + 1)$

3c) $[5a(a+7) + 2(a+7)]$

$$5a(a+7) + 2(a+7)$$

$$(a+7)(5a+2)$$

3d) $4m(3m-2) - 1(3m-2)$

$$(3m-2)(4m-1)$$

Feb 18-10:00 AM

Partial Factoring

$$9xa + 3xb + 6a + 2b$$

$$3x[3a+b] + 2[3a+b]$$

$$(3a+b)(3x+2)$$

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$$9xa + 6a + 3xb + 2b$$

$$3a(3x+2) + b(3x+2)$$

$$(3x+2)(3a+b)$$

Sep 23-10:32 AM

$$f(x) = a(x-h)^2 + k$$

$$E(v) = -0.013(v-41)^2 + 33.658$$

$a = -0.013$

$h = 41$

$k = 33.658$

$(41, 33.658)$

$X = 41$

$E = m/gal$

$v = mph$

Sep 23-10:50 AM